

LAND RECLAMATION COMMISSION

STATE OF MISSOURI

P.O. BOX 176

JEFFERSON CITY, MISSOURI 65102

573-751-4041

Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO

G.S. ROOFING PRODUCTS, INC.

Pursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements

In the application, a permit is hereby granted to engage in surface mining of
granite in the state of Missouri. The extent of the

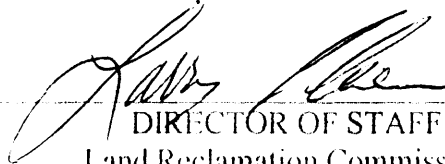
Proposed mining operation(s) will be on 176.5 acres, more or less.

The locations of the operation(s) under this permit is/are as follows: **Renewal**

County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
Wayne	02, 03, 34, 35	29N, 30N	03E	176.5	0	176.5	Gads Hill Quarry	0526

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo, 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

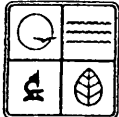
IN WITNESS WHEREOF I have hereunto set my hand this 29th day of January 2004


DIRECTOR OF STAFF
Land Reclamation Commission

Permit No. 0530

Effective Date 03/01/2004

Expiration Date 02/28/2005



MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION

PERMIT RENEWAL FOR INDUSTRIAL MINERAL MINES

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P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

MISSOURI LAND
RECLAMATION COMMISSION

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL G.S. Roofing Products Co., Inc.		DATE 1/12/04	
ADDRESS PO Box 307	CITY Piedmont	STATE MO	ZIP CODE 63957
CONTACT PERSON Richard McGee		TELEPHONE NUMBER 573-223-7554	

FEES: COMPLETE SECTION I OR SECTION II

SECTION I. Fees: Open pit operators and those mining more than 5,000 tons of sand and/or gravel:

1. To compute the site fee complete the information below:

SITE NAME OR NUMBER (add a separate sheet for additional sites)	Mark each month that the site will be operated during the permit year	For sites operated less than six months per permit year pay \$150 For sites operated six months or more per permit year pay \$300
1. Gads Hill Quarry	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$ 300.00
2.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
3.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
4.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
5.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
6.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
7.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
8.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
9.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
10.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$

TOTAL SITE FEE **\$ 300.00**

2. Acreage Fee \$5 X **176.5** number of acres bonded **\$ 882.50**

3. Annual Permit Fee **\$ 500**

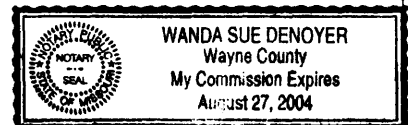
4. Total Fee (Add totals from 1, 2 and 3) **\$ 1,682.50**

NOTE: If Total Fee exceeds \$2,500.00 then pay only **\$ 2,500**

SECTION II. FEES: Sand or gravel operators mining less than 5,000 tons per year:

1. Annual Permit Fee **\$ 300**

SIGNATURE OF APPLICANT 		TITLE Plant Manager	DATE 1/12/04
Appeared before me this 12th day of January , 20 04 , to me personally known, who executed the above as their free acts and deeds.			
NOTARY PUBLIC EMBOSSEER SEAL	STATE OF Missouri	COUNTY (OR CITY OF ST. LOUIS) Wayne	
	SUBSCRIBED AND SWORN BEFORE ME, THIS 12th DAY OF January YEAR 2004		
	NOTARY PUBLIC SIGNATURE Wanda Sue DeNoyer	MY COMMISSION EXPIRES 08/27/04	USE RUBBER STAMP IN CLEAR AREA BELOW.
FOR DEPARTMENT USE ONLY: APPROVED BY 		DATE APPROVED 1-21-04	PERMIT NUMBER 0530
		EXPIRATION DATE 2-28-05	





MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION
SITE INFORMATION FORM

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To be completed for each separate area of disturbance associated with mining operations.

SITE NAME OR NUMBER Gads Hill Quarry		PERMIT NUMBER 0530	
COMPANY NAME G.S. Roofing Products Co., Inc.		MISSOURI LAND RECLAMATION COMMISSION	
COUNTY Wayne	1/4 SECTION SE SW and NW NW NE	SECTION 34 35 2 3	
TOWNSHIP 30N 30N 29N 29N	RANGE 03E 03E 03E 03E	ACRES 285 (long term)	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)			
MINERAL COMMODITY Granite		ESTIMATED TONS/YEAR (FOR GRAVEL SITES) 1,300,000	

NAME OF LANDOWNER (ATTACH LIST IF MORE THAN ONE) Union Pacific Railroad Company		
ADDRESS 1416 Dodge St.		
CITY Omaha	STATE NE	ZIP CODE 68179
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input checked="" type="checkbox"/> OTHER (DESCRIBE): Written agreement		DATE OF AGREEMENT 9/17/96
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		

MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Union Pacific Railroad Company		
ADDRESS 1416 Dodge St.		
CITY Omaha	STATE NE	ZIP CODE 68179
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input checked="" type="checkbox"/> OTHER (DESCRIBE): Written agreement		DATE OF AGREEMENT
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		

NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.

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MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION

MINE PLAN

MISSOURI LAND
RECLAMATION COMMISSIONP.O. BOX 176
JEFFERSON CITY, MO 65102

COMPANY NAME

G.S. Roofing Products Co., Inc.

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR☒ LONG TERM, FOR PERIOD THROUGH DATE: July 1, 2030

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.

The mine site is a heavily wooded forest of hardwoods with some sparse occurrence of pine species. The topsoil has an average depth of approximately five inches. The topography is gently sloped to slopes of 3:1. The proposed permitted area is located adjacent and to the east of our existing mining activities.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

A. TOPSOIL

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

5

INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

All trees will be cleared before topsoil removal. For short distances, topsoil will be pushed with a dozer to the topsoil stockpile area. For longer distances, the topsoil will be loaded with a front end loader onto trucks and taken to the topsoil stockpile area. Because there is only an average of five inches of topsoil, an additional seven inches of subsoil will also be removed to obtain a total of 12 inches of soil. A soil survey is attached.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Topsoil piles will be sloped with a grader and seeded with grass to protect them from erosion.

PERMIT NO.

0530

SITE NUMBER/NAME

Gads Hill Quarry

B. SOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil will be dozed in front of the pit area and placed in stockpile locations (see mine plan map for stockpile locations).

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MISSOURI LAND
RECLAMATION COMMISSION**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

Low pH pit water is treated with a liquid caustic treatment system.

D. PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

The pit will be mined to the southeast in lifts of 20 to 50 ft.
See the mine plan map for future affected area.

YES NO☐ ☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐ ☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road?
(NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐ ☒

Will any excavation start at or within fifty feet (50') of any property line?
(NOTE: If the answer is "yes", a safety barrier may be needed.)

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SITE NUMBER/NAME

Gads Hill Quarry

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RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2.

A. REVEGETATION (Attach additional sheets, if needed)

MISSOURI LAND

REVEGETATION MIX #1

PURPOSE OR LAND USE

RECLAMATION COMMISSION

B. SEEDING OR PLANTING TIME

Wildlife

Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Seed mix will be broadcast and disced with a tractor, if possible, the first spring after topsoil replacement.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard grass	15-20		
Korean lespedeza	10		
Ladino clover	5		

REVEGETATION MIX #2

PURPOSE OR LAND USE

B. SEEDING OR PLANTING TIME

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

PERMIT NO.

0530

SITE NUMBER/NAME

Gads Hill Quarry

SEP 23 2002

B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

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All disturbed areas that are not encompassed by a highwall or consolidated material will be contoured to match surrounding natural slopes. They then will be topsoiled with at least 12 inches of topsoil and then revegetated. None of the reclaimed areas will have a slope greater than the steepest natural slope in the area (a 3:1 slope).

C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES**GRADING**

Grading will be done within a year after all spoil is replaced onto the area to be reclaimed.

REPLACEMENT OF TOPSOIL

Topsoil will be applied as soon as the reclaimed area is completely graded (grading will be done within a year after all spoil is placed on the area to be reclaimed) and before the next spring arrives so that the reclaimed area can be seeded during the spring.

REVEGETATION

All topsoiled areas will be seeded during the first spring following topsoil replacement.

AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

12" (5" of topsoil combined with 7" of unconsoiled)

D. USE OF LAND WHEN RECLAIMED

Estimate acreage of each land use below, after reclamation	ESTIMATED ACRES:
Wildlife (forest or other habitat with livestock excluded)	285
Agricultural (pasture, cropland, and horticultural)	
Development (residential, industrial, and recreational)	
Water impoundments (for wildlife, agriculture, or development)	
PERMIT NO. 0530	SITE NUMBER/NAME Gads Hill Quarry

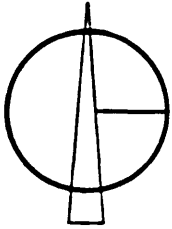
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By my signature, I attest to the following:

MISSOURI LAND
RECLAMATION COMMISSION

1. All statements made on this Mine Plan Form are correct, complete and true, to the best of my knowledge.
2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

SIGNATURE OF APPLICANT <i>[Signature]</i>		TITLE <i>Plant Manager</i>	DATE <i>9/19/02</i>
NOTARY PUBLIC EMBOSSEY OR BLACK INK RUBBER STAMP SEAL	STATE <i>Missouri</i>	COUNTY (OR CITY OF ST. LOUIS) <i>Wayne</i>	
	SUBSCRIBED AND SWORN BEFORE ME, THIS <i>19th</i> DAY OF <i>September</i> YEAR <i>2002</i>		
	NOTARY PUBLIC SIGNATURE <i>[Signature]</i>	MY COMMISSION EXPIRES <i>12-13-04</i>	<div style="border: 2px solid black; padding: 5px; text-align: center;"> DAHNA L. EMERSON NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI WAYNE COUNTY My Commission Expires December 13, 2004 </div>
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <i>Dahna L. Emerson</i>		
APPROVED BY (DIRECTOR'S REPRESENTATIVE) <i>[Signature]</i>		DATE APPROVED <i>11/14/02</i>	PERMIT NUMBER <i>0530</i>



BERRI EXPLORATION SERVICES

2807 Bremerton Road • St. Louis, MO 63144 • (314) 962-5270

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RECLAMATION COMMISSION

SOIL SURVEY

OF PROPOSED EXPANSION

UNION PACIFIC MINERALS

QUALITY AGGREGATE QUARRY

Prepared for: Mr. Jerry Blossom
Union Pacific Resources - Minerals
P.O. Box 7
Fort Worth, Texas 76101 - 0007

Prepared By: Robert C. Berri, Jr. RPG
Berri Exploration Services
2807 Bremerton Road
St. Louis, Missouri 63144

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SUMMARY

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Soils in the area of Union Pacific's Quality Aggregate quarry at Gads Hill, Missouri were evaluated to determine their physical properties and pH. Field testing indicated that the typical value of pH of the soils in this area ranges from 6.4 to 6.8. Soil thickness for most soils present at this location ranges from 3 to 3.5 feet with the exceptions being the Killarney very cobbly silt loam with potential thickness of greater than 5 feet in valleys, and exposures of Precambrian bedded rhyolite.

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Introduction

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Quality Aggregate quarry in Gads Hill, Missouri produces crushed Precambrian Felsite for use as railroad ballast. The quarry is owned by Union Pacific Minerals, with the bulk of the rock produced being used by Union Pacific Railroad.

In the Fall of 1992 the quarry acquired additional acreage to the south of the current operations to be used for expansion of the pit.

The purpose of this report is to determine what soil types are present, and to provide particle size and pH test results of the soils. The methods used to determine this information include field investigation of the site, soil sampling, airphoto interpretation, pH testing in the field, and sieve analysis of the soils.

Location

The Gads Hill quarry is located approximately 4.5 miles north of the town of Piedmont, Missouri on a branch of the Union Pacific Railroad.

Climate

Climate in the area of southern Missouri is temperate with temperatures typically ranging from 0 degrees to 100 degrees Fahrenheit during the course of a year. Annual rainfall varies, but is normally in the range of 60 to 80 inches per year.

Vegetation is typical of a dry igneous forest with the predominant trees being oak and hickory, and including shortleaf pine, sumac, and white ash.

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Topography

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Topography in the area of the Quality Aggregate quarry is hilly with relatively narrow valleys and only minor floodplains. The topographic relief is approximately 400 feet from valley bottoms to hilltops with local elevations ranging from 740 to 1140 feet MSL.

Primary drainage in the area is provided by a minor branch of the Black River. Surface water on most hills in the area is drained by steep sided valleys and collects in small intermittent and semi-permanent creeks.

Soil Formation

Soils on the land owned by Union Pacific have been formed by residual and alluvial processes. Alluvial soils exist as thin gravelly materials in drainage valleys and as thicker layers of soils in valleys between hills. These soils are the result of erosion and transportation of Precambrian and Paleozoic Rocks in the area, with the gravels containing various amounts of rhyolite, chert, sandstone, and dolostone.

Most soil types in the area are residual and are formed by weathering and the action of plants and animals on the bedrock. The Killarney very cobbly slit loam is the only soil type in the area that is composed primarily of alluvial material. The source of this alluvial material is minor drainage valleys on Gads Hill.

Soil Types

Five different soil types were noted in the area of the proposed quarry expansion. These are: Viburnum silt loam, two Clarksville very gravelly silt loams, Killarney very cobbly silt loam, and the Taumsauk-Irondale-Rock Outcrop Complex. Descriptions of these soil types are as follows:

MAP
SYMBOL

MAP UNIT DESCRIPTION

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10 - B Viburnum silt loam, 2 to 5 percent slopes

This deep gently sloping somewhat poorly drained soil is on the most stable portion of ridgetops. The surface layer is dark grayish brown silt loam about 5 inches thick. The subsurface layer is brown silt loam about 4 inches thick. The upper 11 inches of the subsoil is brown silty clay loam. The next 20 inches is brown very gravelly silty clay loam. (estimated to be 45 % gravel)

Permeability of the Viburnum soil is moderately slow. Surface runoff is rapid. The available water capacity is low. The content of organic matter and natural fertility are low,

12 - D Clarksville very gravelly silt loam, 3 to 14% slopes.

This deep, gently to strongly sloping, somewhat excessively drained soil is on narrow ridgetops, side slopes and in heads of drainageways. Stone and boulders cover less than one percent of the surface. The surface layer is dark brown very gravelly silt loam (est 40% gravel) about 5 inches thick. The subsurface layer is pale brown very gravelly silt loam (estimated 45%) about 13 inches thick. The upper 20 inches of the subsoil is brown very gravelly silt loam (estimated 55% gravel)

Permeability is moderately rapid in the upper part of the Clarksville soil and moderate in the lower part. Surface runoff is rapid. The available water capacity is low. Organic matter content and natural fertility are low.

12 - F Clarksville very gravelly silt loam, 20 to 50 percent slopes.

This deep, steep and very steep, somewhat excessively drained soil is on side slopes. Stones and boulders cover less than one percent of the surface. The surface layer is dark brown very gravelly silt loam (estimated 40% gravel) about 3 inches thick. The subsurface layer is pale brown very gravelly silt loam (est. 50% gravel) about 13 inches thick. The upper 20 inches of the subsoil is brown very gravelly silt loam (estimated 60% gravel).

Permeability is moderately rapid in the upper part of the Clarksville soil and moderate in the lower part. Surface runoff is rapid. The available water capacity is low. Organic matter content and natural fertility are low.

- 14 - E Killarney very cobbly silt loam, 14 to 50 percent slopes, rubbly.

This deep, moderately steep to steep, moderately well drained soil is on low side slopes and foot slopes of the mountains. Stones and boulders cover about 20 percent of the surface. The surface layer is dark grayish brown silt loam about 3 inches thick. The subsurface layer is brown very cobbly silt loam about 4 inches thick. The subsoil to a depth of greater than 60 inches is brown very cobbly silty clay loam in the upper part and very gravelly silty clay loam in the lower part.

Permeability is moderately slow above the fragipan in the Killarney soil and very slow in the fragipan. Surface runoff is rapid. The available water capacity and the organic matter content is low.

- 16 - F Taumsauk-Irondale-Rock Outcrop Complex, 25 to 50 percent slopes, rubbly

This map unit occurs as areas of steep to very steep soils intermingled with areas of igneous rock outcrops. The unit is on mountainous slopes. The Taumsauk soil is shallow (less than 20 inches soil material over bedrock) and somewhat excessively drained and the Irondale soil is deep and well drained. Stones and boulders cover about 40 percent of the surface. This area consists of approximately 55 percent Taumsauk soil, 30 percent Irondale soil and 15 percent Rock outcrop. The soils and the rock outcrops occur as areas so small that separating them is not practical.

The Taumsauk soil has a surface layer of very dark grayish brown very cobbly silt loam about 6 inches thick. The subsoil is about 10 inches thick. The upper part is dark brown very cobbly silt loam and the lower part is dark yellowish brown very cobbly silt loam. Hard Rhyolite bedrock is at a depth of about 14 to 18 inches.

The Irondale soil has a surface layer of very dark grayish brown very cobbly silt loam about 4 inches thick. The subsurface layer is dark yellowish brown very cobbly silt loam about 5 inches thick. The subsoil is about 24 inches thick. The upper part is yellowish brown very cobbly silt loam. The next part is yellowish brown very gravelly silt loam, and the lower part is yellowish brown very cobbly silty clay loam. Hard Rhyolite bedrock is at a depth of about 30 to 35 inches.

Permeability is moderate in the Taumsauk and Irondale soils. Surface runoff is very rapid on the Taumsauk soil and rapid on the Irondale soil. The available water capacity is very low in the Taumsauk and low in the Irondale. The organic matter content is moderately low in both soils.

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Soil Thickness

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Each of the soil types has a surface layer of a gravelly to silty loam with organic material approximately 3 to 6 inches in thickness.

Below this layer the soils average approximately 2.5 to 3 feet in thickness, with the exception of the Killarney very cobbly silt loam. This soil is found in valleys and ravines in the area and is probably alluvial in origin. Thickness of the Killarney very cobbly silt loam ranges from 2 to 6 feet and may be greater in areas west and east of the quarry where more sediments could have accumulated due to runoff from hillsides.

Testing

Samples were taken with a hand-powered bucket auger, with sample depths being approximately 0.5 to 1.5 feet. Field pH measurements were also taken at the same time as the soil samples. The pH readings were taken at a depth of approximately 4 to 6 inches to reduce the effects of leaves and organic matter on the ground surface. Results from the pH testing are included in the appendices of this report, with typical pH values ranging from 6.5 to 6.8.

Soil samples were limited to material with particle sizes of less than 2 inches, due to the size of the auger opening of the sampling device. Most soils were noted to contain amounts of gravel, cobbles and boulders. The cobbles and boulders were not included in the soil gradations, however estimated amounts of cobbles and boulders are provided with the soil descriptions.

Laboratory testing of the soil samples was performed in accordance with ASTM procedures to determine particle sizes of the soil materials. Grain size test results are included in the appendices of this report.

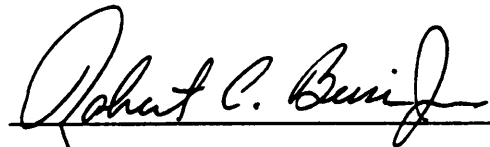
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Comments

This report reflects the soil conditions of the Quality Aggregate quarry as of December 4, 1992, and is based on field investigations, soil sampling, airphoto interpretation and laboratory testing of the soils. The soil unit map is based on the opinion of the geologist performing the investigation. and is based on the field observations and test results.



Robert C. Berri, Jr. RPG

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Sample Number

pH Value

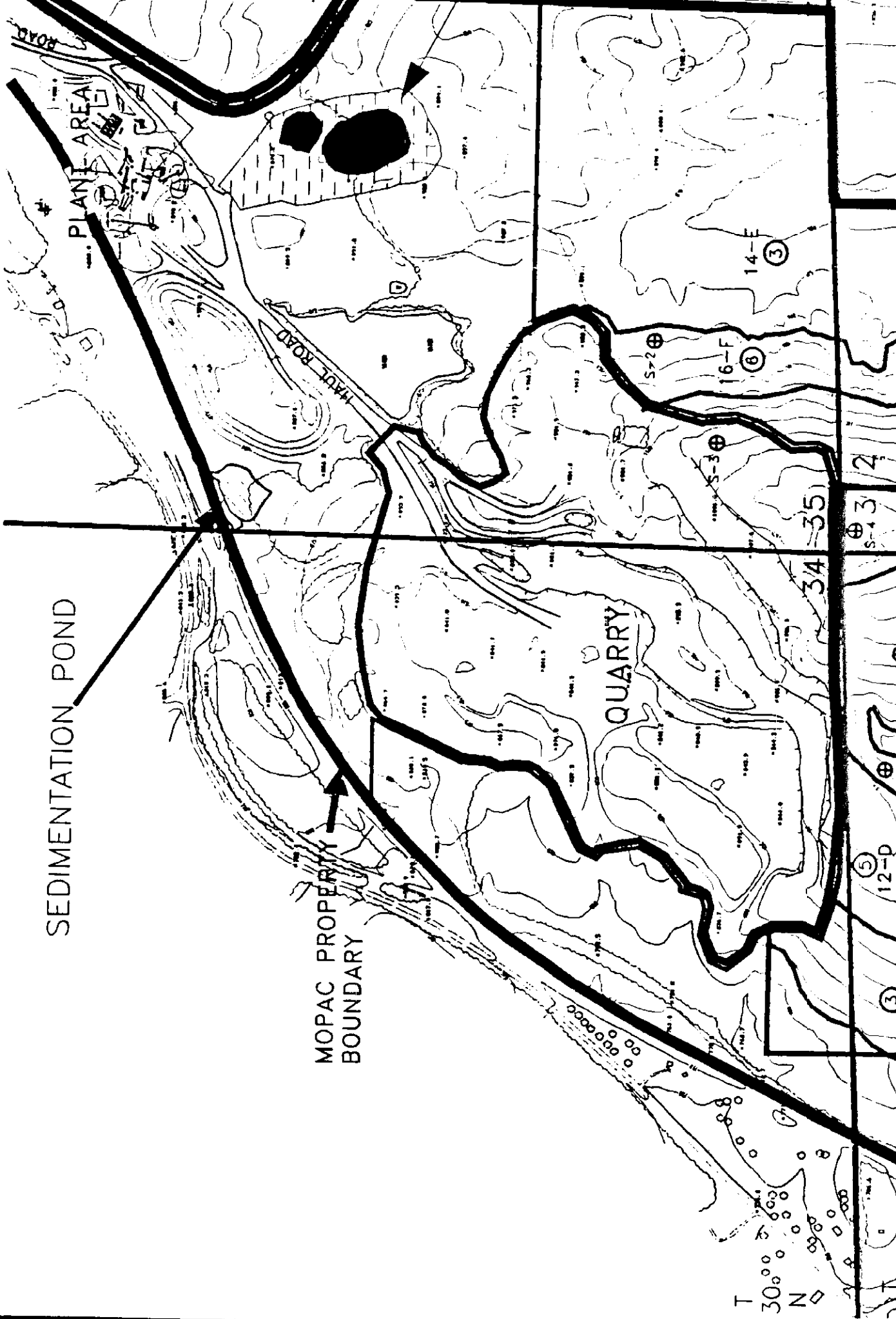
S-1	6.4
S-2	6.6
S-3	6.4
S-4	6.6
S-5	6.8
S-6	6.7
S-7	6.8
S-8	6.4
S-9	6.5

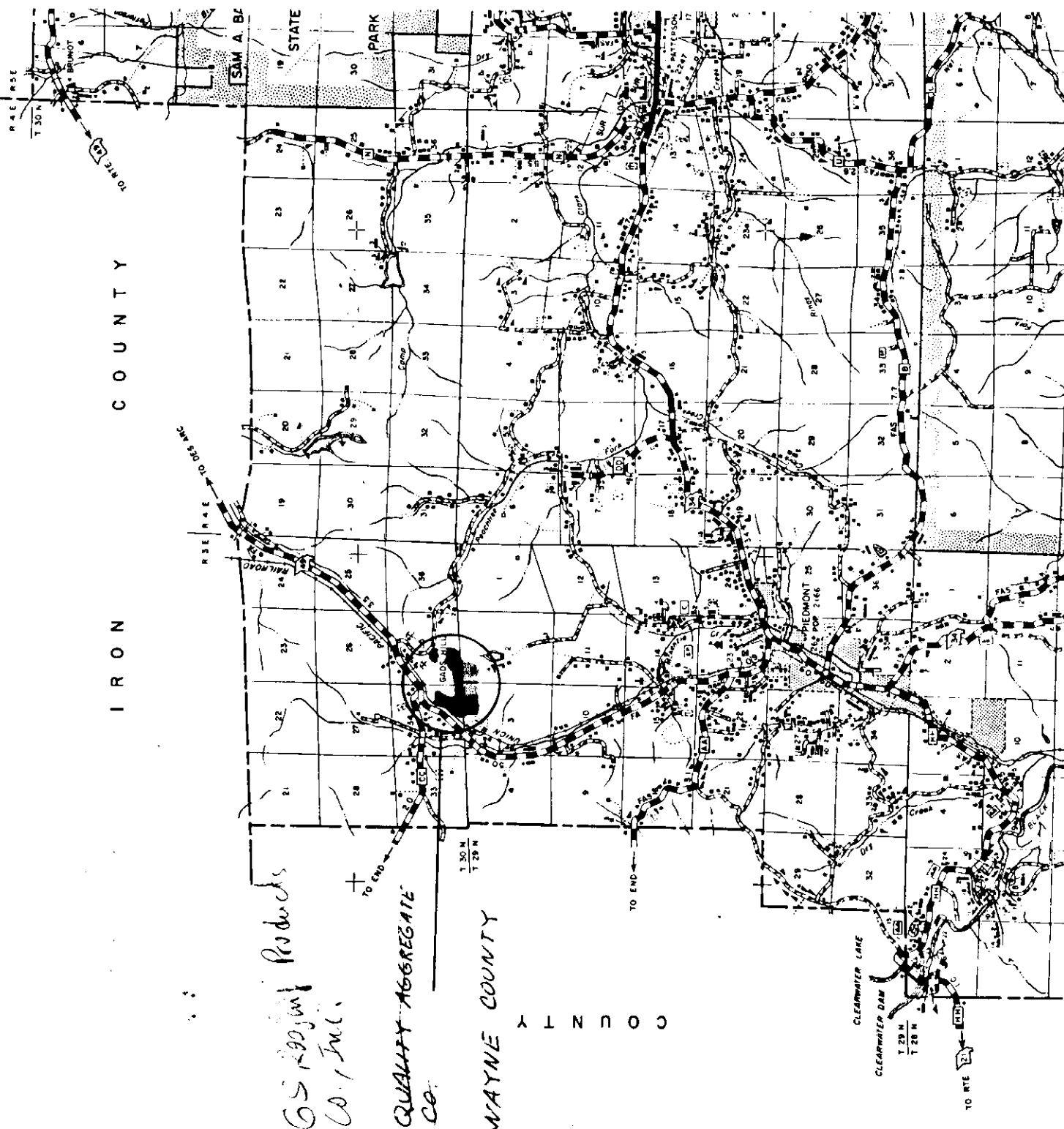
R 3 E

SEDIMENTATION POND

MOPAC PROPERTY
BOUNDARY

QUARRY





GS Logging Products
Co., Inc.

QUALITY AGGREGATE
CO.

WAYNE COUNTY

COUNTY

DISTRICT
BOUNDARY

Piedmont S

UNION

PERMIT ACREAGE PRIOR TO 2002 100 ACRES
9.5 ACRES ('92 AREA) PLUS 67 ACRES ('94 AREA)
EQUALS 76.5 ACRES

R 3 E

SEDIMENTATION POND

UP PROPERTY
BOUNDARY

FINES
STORAGE

TOPSOIL
STOCKPILE

OVERBURDEN

QUARRY

T
30°
N

34
35

3/2
AFFECTED AREA 1994

2002 PERMIT AREA

PLANT AREA

TRAIL ROAD

